

LOW COLLECTOR SATURATION VOLTAGE LARGE CURRENT

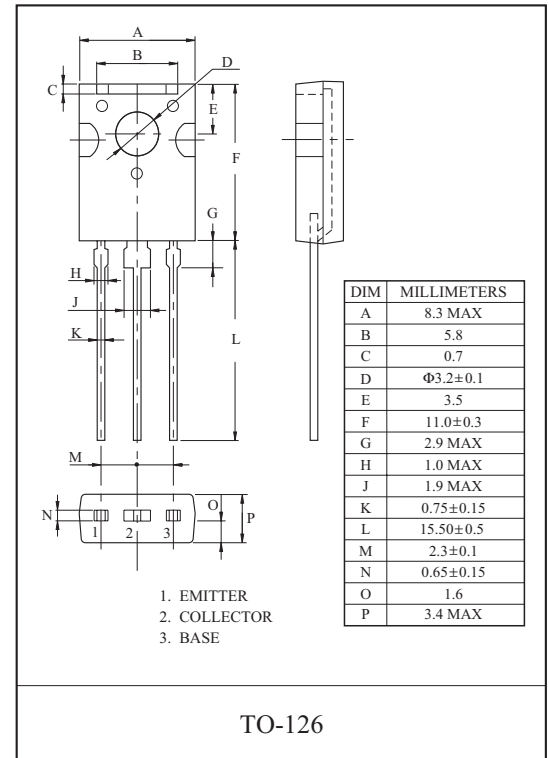
FEATURES

- High Power Dissipation : $P_C=1.5W(T_a=25^\circ C)$
- Complementary to KTD1691.

MAXIMUM RATING ($T_a=25^\circ C$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-60	V
Collector-Emitter Voltage		V_{CEO}	-60	V
Emitter-Base Voltage		V_{EBO}	-7	V
Collector Current	DC	I_C	-5	A
	Pulse *	I_{CP}	-8	
Base Current		I_B	-1	A
Collector Power Dissipation	$T_a=25$	P_C	1.5	W
	$T_c=25$		20	
Junction Temperature		T_j	150	
Storage Temperature Range		T_{stg}	-55 150	

* PW 10ms, Duty Cycle 50%



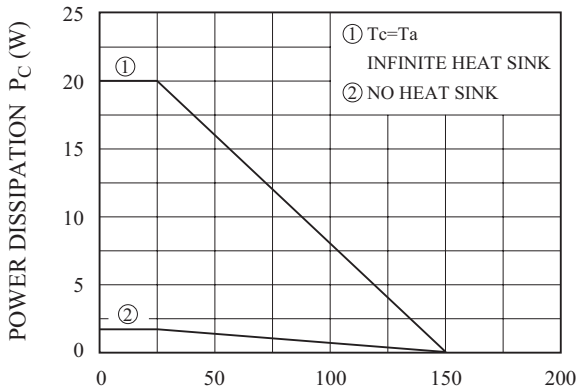
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=-50V, I_E=0$	-	-	-10	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=-7V, I_C=0$	-	-	-10	μA
DC Current Gain		h_{FE1}	$V_{CE}=-1V, I_C=-0.1A$	60	-	-	
	*	h_{FE2} (Note)	$V_{CE}=-1V, I_C=-2A$	160	-	400	
		h_{FE3}	$V_{CE}=-2V, I_C=-5A$	50	-	-	
Collector-Emitter Saturation Voltage *		$V_{CE(sat)}$	$I_C=-2A, I_B=-0.2A$	-	-0.14	-0.3	V
Base-Emitter Saturation Voltage *		$V_{BE(sat)}$	$I_C=-2A, I_B=-0.2A$	-	-0.9	-1.2	V
Switching Time	Turn On Time	t_{on}	<p>$I_{B1} = I_{B2} = 0.2A$ DUTY CYCLE $\leq 1\%$</p>	-	0.15	1	μS
	Storage Time	t_{stg}		-	0.78	2.5	
	Fall Time	t_f		-	0.18	1	

* Pulse test : PW 350 μS , Duty Cycle 2% Pulse

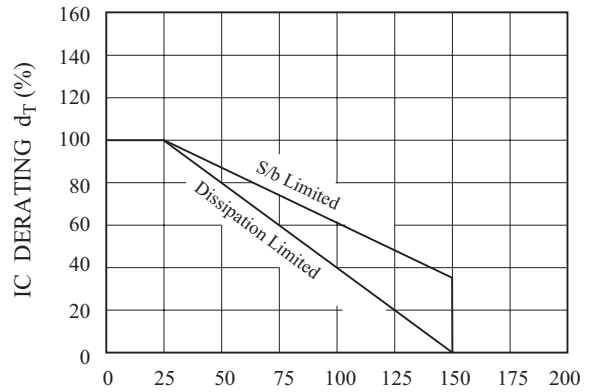
Note) $h_{FE(2)}$ Classification : O:160 320, Y:200 400.

$P_C - T_a$



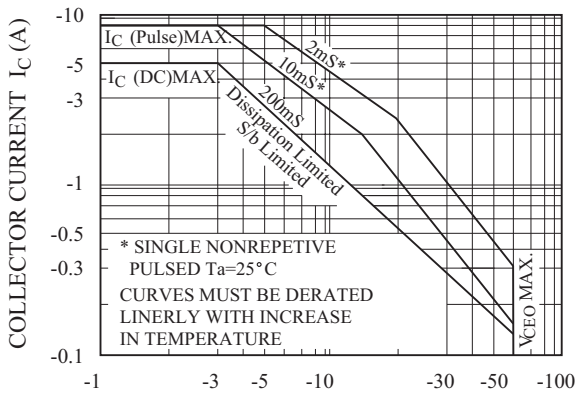
AMBIENT TEMPERATURE T_a (°C)

$d_T - T_C$



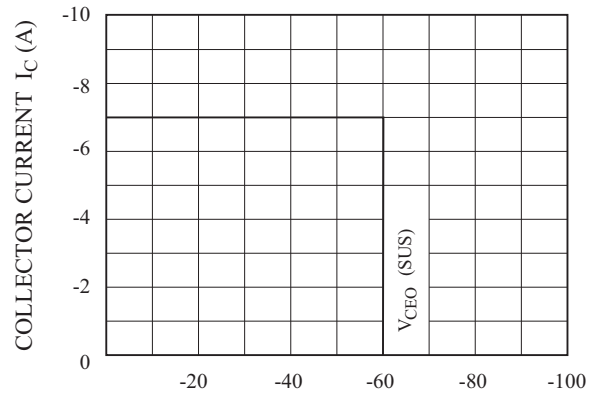
CASE TEMPERATURE T_C (°C)

SAFE OPERATING AREA



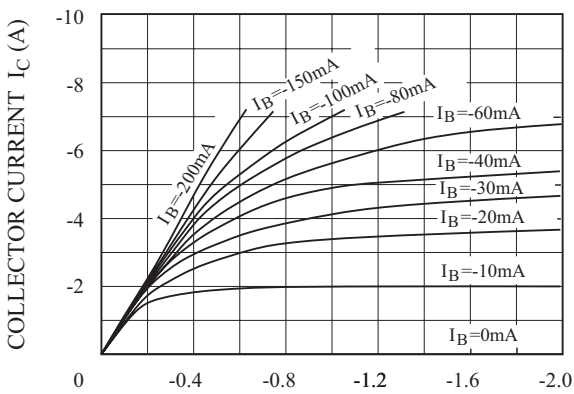
COLLECTOR-EMITTER VOLTAGE V_{CE} (V)

REVERSE BIAS SAFE OPERATING AREA



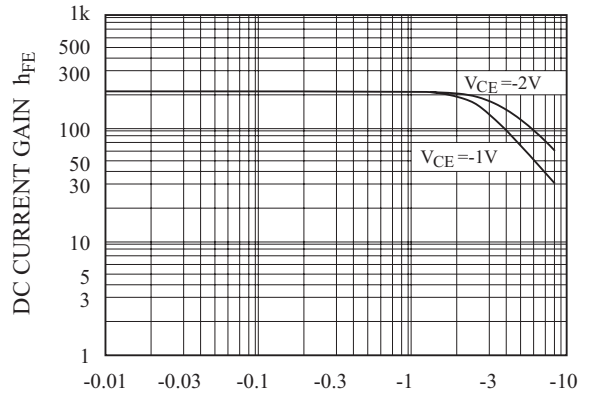
COLLECTOR-EMITTER VOLTAGE V_{CE} (V)

$I_C - V_{CE}$



COLLECTOR-EMITTER VOLTAGE V_{CE} (V)

$h_{FE} - I_C$



COLLECTOR CURRENT I_C (A)

KTB1151

$V_{BE(sat)}, V_{CE(sat)} - I_C$

